



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,245	01/23/2004	Karl K. Holt	24852.24682	8050
24382	7590	08/12/2005	EXAMINER	
			BARRY, CHESTER T	
		ART UNIT		PAPER NUMBER
		1724		
DATE MAILED: 08/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,245	HOLT, KARL K.	
	Examiner	Art Unit	
	Chester T. Barry	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 23 January 2004.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/23/04</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Claims 1, 6 – 9, 10, 15-18 are rejected under 35 USC Sec. 103(a) as obvious over Perriello in view of Romero and Blough.

US Pat. Publication 2003/0234217 to Perriello describes an apparatus for the remediation of wastewater in a system comprised of at least one septic tank 14 having an outlet, a distribution system 15, 16, 17 and a leaching system, i.e., drainfield [0028], wherein effluent drains from the tank outlet through the distribution system and to the leaching system. The system comprises at least one positive pressure pump (air compressor 38) having an output, a tube having a first end and a second end, the first end being not merely attachable, but actually attached, to the pump output, and a plurality of perforated pipes not merely attachable but actually attached to the second tube end, wherein, when the perforated pipes are introduced into a portion of the system, e.g., within septic tank 14, the pump is used to deliver air through the tube to the perforated pipe so as to introduce air into the effluent and allow aerobic bacteria to proliferate (see, for example, claim 14).

The air diffuser or sparger is a perforated pipe, not an air stone.

USP 6200470 to Romero describes an aerated septic tank having air diffusers 17A and 18A. Romero suggests that these be “air stones” to produce a large number of small bubbles (col 5 lines 30 – 35). The skilled artisan would recognize that small

bubbles are more desirable than large bubbles especially in view of USP 6245237 to Blough.

Accordingly, in view of Romero and Blough, it would have been obvious to have provided Perriello's device with air stones in order to increase the number of small air bubbles thereby improving aeration rates.

Per claim 6, to the extent that "the tubing" of claim 6 is intended to refer to the "tube" of claim 1, it would have been obvious to have made the tube from a common, inexpensive, inert material, such as a polyvinylchloride (PVC) polymer. Drewery expresses concern about preventing crushing of air line 340. USP 6159371 to Dufay suggests using PVC air tubing to prevent crushing of the air line (col 15 line 52). Accordingly, it would have been obvious to have made the Perriello air tubing from PVC as suggested by Dufay.

Per claim 7, Perriello shows an influent pipe carrying waste comprising bacteria, e.g., bacteria naturally found in human fecal matter.

Per claim 8, the other tank shown, i.e., the grease interceptor, meets the strictures of a "holding tank" for it is a tank which holds a volume of liquid. Per claim 9, it is mobile and portable because it is possible to remove it from the ground.

Art Unit: 1724

USP 6475395 to Schmit and USP 6780318 to Fife are cited of interest for various air diffuser designs and teachings.

Claims 2 – 5, 11 - 14 are rejected under 35 USC Sec. 103(a) as obvious over Perriello in view of Romero and Blough, as applied to claim 1 above, further in view of USP 6475395 to Schmit, USP 6096203 to Drewery, USP 5549818 to McGrew, USP 5490935 to Guy, and USP 5221470 to McKinney. Schmit teaches use of a plurality of air tubes and air diffusers, as do USP 6096203 to Drewery, USP 5549818 to McGrew, USP 5490935 to Guy, and USP 5221470 to McKinney. It would have been obvious to have used a plurality of air tubes and air diffusers as suggested by any of these references, alone or in combination. At least Schmit suggests a low pressure drop sintered air stone having a relatively large surface area. Per claim 5, Drewery at col 11 – 12 describes and suggests use of an electrical control panel and air compressor housed in a protective cover. It would have been obvious to have made the protective cover or housing weatherproof to protect the electrical circuits housed therewithin, or to comply with local electrical codes or NEMA standards.

Claims 1- 4, 6-7, 9, 10 - 20 are rejected under 35 USC Sec. 112(2) for failure to particularly point out and distinctly claim the invention. In claim 1, it is said that the first end of the tube is “attachable” to the pump outlet. It is unclear whether this language requires that the first end of the tube not be attached to the outlet of the pump because a tube already attached to the outlet is not “attachable.” Only an unattached tube is

capable of being attached just as only attached tubes are capable of being unattached from the pump outlet. It is suggested that each instance of "attachable" in claim 1 be changed to "attached" and edited further as necessary for grammatical reasons. In claim 2, it is unclear what the phrase "and combinations thereof" means given that the word "and" (rather than "or") is recited in the phrase "pumps, tubes, and stones." That is, the phrase, "and combinations thereof" makes sense if the preceding phrase were "pumps, tubes, or air stones," but does not make sense as written. Per claim 3, it is unclear what it means for the plurality of pumps, tubes, and air stones to be distributed at different locations throughout the system because it is unclear what the alternative would be: How could the plurality of pumps, tubes, and air stones to be located at the same location in the system? Perhaps what applicant intended to claim was, "wherein the plurality of pumps, tubes, and air stones are distributed throughout the system."

The expressions "low pressure drop" and "relatively large" in claim 4 are relative terms which render the claim indefinite. The term "low" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Absent a description in the specification of an absolute measure of the pressure drop across the air stones which could form the basis of an appropriate amendment to the claim, it is suggested that this claim be cancelled because the examiner is unaware of any amendment or argument which would cure this "pressure drop" defect in claim phraseology. Similarly, the term "relatively large" is not defined by

Art Unit: 1724

the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Absent a description in the specification of an absolute measure of the air stones' diameter or area which could form the basis of an appropriate amendment to the claim, it is suggested that this claim be cancelled because the examiner is unaware of any amendment or argument which would cure this "area" defect in claim phraseology.

Per claim 6, claim 1 lacks antecedent basis for the term, "the tubing."

Per claim 7, improper Markush group language is recited. The proper phrasing is, "one or more materials selected from the group consisting of . . ."

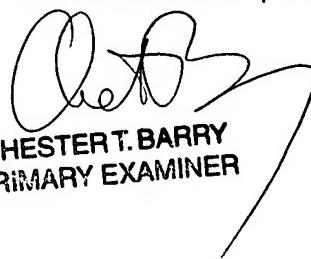
Per claim 9, it is unclear what "mobile and/or portable" means because "mobile and portable" means the same thing as "mobile or portable." It is suggested that either the phrase "and/or portable" or the phrase "mobile and/or" be deleted from claim 9.

Claims 10 and 19 are rejected under this sub-section because it is unclear whether the invention is directed to remediation of the wastewater treatment system, or to remediation of the wastewater. It appears that the invention is directed to remediation of wastewater.

Claims 5, 8, 20 are rejected under this sub-section of the statute at least for the reasons applicable to claims 1 and 19.

Claims 19 – 20 are allowable over prior art.

571-272-1152


Chestert. Barry
PRIMARY EXAMINER